June 4, 2008

Mr. Larry Prather
US Army Corps of Engineers, Headquarters
Attn: P&G Revision
CECW-ZA
441 G Street, NW
Washington, DC 20314-1000

Dear Mr. Prather:

Subject: Preliminary Comments on Revisions to Principles and Guidelines

The South Florida Water Management District (SFWMD) has served as the U.S. Army Corps of Engineers (Corps) local sponsor for the Central and Southern Florida Flood Control Project since the original authorization in 1948. As the mission of the SFWMD has evolved through the years so has the Corps mission, particularly with regard to ecosystem restoration. As local sponsor for the Kissimmee River Restoration Project, C-111 Project, Comprehensive Everglades Restoration Plan and many other Corps projects the SFWMD has developed a significant body of expertise in the Corps' planning process.

We appreciate the opportunity to provide the Corps with a set of preliminary comments regarding the revision of the Principles and Guidelines. Please include the SFWMD in any communications or distribution of the Draft revised Principles and Guidelines as they become available for review and comment. If you have any questions regarding our comments please contact me at 561-248-0494 or email at tteets@sfwmd.gov.

Sincerely,

Thomas Teets, AICP
Policy Manager, Everglades Restoration

TT/

c: Greg Knecht, FDEP

bc: Ken Ammon
Tommy Strowd
Larry Gerry
Brenda Mills

**South Florida Water Management District**
**Preliminary Comments Related to the Revision of Economic and Environmental Principles and Guidelines and Related Land Resources Implementation Studies**
**June 4, 2008**

The focus and direction of the U.S. Army Corps of Engineers Civil Works process has evolved significantly since the last update of the Principles and Guidelines (P&G) in 1983. The evolution of the Central and Southern Florida (C&SF) Project is an excellent example of how the Corps of Engineers' role in water resource management in the United States has changed through time. The C&SF Project was first authorized by Congress in 1948 with the authorized purposes of the project to include flood control, regional water supply for agricultural and urban areas, prevention of salt water intrusion, water supply to Everglades National Park, preservation of fish and wildlife, recreation and navigation.

Many additional authorizations related to the C&SF Project have occurred over the years with the Congressional authorization of the Kissimmee River Restoration Project in 1992. This began the major refocus of the Corps of Engineers toward restoration to address unanticipated results of building the C&SF Project. In 1992 the Corps of Engineers received its first of two authorizations to complete the Central and Southern Florida Comprehensive Review Study. The purpose of this study was to re-examine the C&SF Project to determine the feasibility of modifying the project to restore the south Florida ecosystem and to provide for the other water-related needs of the region. This study was completed and submitted to Congress in 1999. The Water Resources Development Act of 2000 approved the Comprehensive Everglades Restoration Plan (CERP or Plan) as a framework for modifications and operational changes to the C&SF Project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection.

The study area for the Comprehensive Review Study was vast, encompassing approximately 18,000 square miles from Orlando to the Florida Reef Tract with at least 11 major physiographic provinces: Everglades, Big Cypress, Lake Okeechobee, Florida Bay, Biscayne Bay, Florida Reef Tract, nearshore coastal waters, Atlantic Coastal Ridge, Florida Keys, Immokalee Rise, and the Kissimmee River Valley. The Kissimmee River, Lake Okeechobee and the Everglades are the dominant watersheds that connect a mosaic of wetlands, uplands, coastal areas, and marine areas. The study area includes all or part of the following 16 counties: Monroe, Miami-Dade, Broward, Collier, Palm Beach, Hendry, Martin, St. Lucie, Glades, Lee, Charlotte, Highlands, Okeechobee, Osceola, Orange, and Polk.

The problems that have been identified resulting from the construction of the C&SF Project are equally vast and include the following:

- extreme fluctuations in high and low water levels in Lake Okeechobee have a major adverse impact on the lake's littoral and pelagic zones and fish and wildlife habitats;
- extreme fluctuations between too much and too little freshwater discharge into the Caloosahatchee and St. Lucie estuaries result in detrimental salinity

conditions and physical alterations of fish and wildlife habitat;
- detrimental hydrologic conditions in freshwater wetland habitats cause major adverse impacts on plant and animal communities of the native Everglades; and,
- unsuitable freshwater flows to Florida and Biscayne Bays and Lake Worth Lagoon adversely impact salinity and physically alter fish and wildlife habitat.

The Plan approved by Congress identified over 60 components that in combination are needed to provide significant restoration benefits throughout the south Florida ecosystem. The complexity and diversity of this restoration effort is a good example of the type of restoration planning and implementation efforts that the Corps of Engineers will be encountering in the future. Unfortunately, these types of planning efforts do not lend themselves well to economic benefit analyses that have been typically used by the Corps of Engineers to select the recommended plan and justify projects in a nationwide setting.

The Congressional action taken on the CERP did not provide full authorization for any of the specific projects identified in the Plan. Therefore, planning efforts were embarked upon to complete feasibility reports, project implementation reports in the case of the CERP, for each individual project. A number of challenges have been encountered in the planning process for this program, the largest environmental restoration program in history, not typically encountered or addressed by the Principles and Guidelines. Implementing these challenges in large, multi-faceted, multi-year restoration programs like the Everglades, California Bay-Delta and Louisiana Coastal Wetlands need to be considered as the Principles and Guidelines are revised in order to be used as the foundation for the Corps of Engineers and other Federal agencies water resource planning processes in the future.

The following statements highlight the types of revisions that are needed in the next version of the Principles and Guidelines:

**Section II- The Federal Objective**

A clear Federal objective for ecosystem restoration needs to be defined which is separate from the current national economic development objective.

**Section IV- General Planning Considerations**

The Principles and Guidelines need to be modified to direct the Federal planning process to be fully collaborative and fully integrate local sponsors into the planning team and decision-making processes. Local expertise and knowledge provided by sponsors can be the key to identifying the correct project alternative.

Risk and Uncertainty- Sensitivity analysis: Risk and uncertainty need to be actively considered throughout the planning process as a means to assist decision makers in understanding areas where knowledge may be lacking, but where action to remedy a

problem is still necessary in spite of uncertainties. Clearly identifying the path forward in order to promote action, rather than as a means to avoid taking action, is required to reduce risk and uncertainty. The adaptive management process should be used first to identify uncertainties, then to reduce uncertainty throughout the implementation process.

**Section V- Inventory and Forecast of Conditions Without a Plan**

Climate change and the affects of sea level change in areas such as south Florida could have significant impacts and influence on the types of alternatives considered in the development of projects. These forecasted conditions need to be factored into the planning process early on in the "Inventory and Forecast of Water and Related Land Resource Conditions".

**Sections VI and VII- Alternative Plans and Accounts**

The current Principles and Guidelines focus predominantly upon the National Economic Development Account (NED) which has been used for many years to justify the projects the Corps of Engineers has been traditionally charged with implementing. The Environment Quality Account (EQ) is in need of complete rewriting in light of the Corps of Engineers expanded role in ecosystem restoration. Unfortunately, alternative formulation and project justification for ecosystem restoration projects cannot be viewed in purely quantitative economic terms as has been used in the case of NED. A NED plan should not be required when formulating alternatives for ecosystem restoration projects.

Currently the Corps of Engineers uses the concept of the National Ecosystem Restoration Plan (NER) to help justify projects that are primarily focused upon ecosystem restoration. This concept needs to be expanded upon within the EQ Account.

One of the challenges of justifying ecosystem restoration projects is the continual need to quantify a benefit that may be primarily qualitative in nature. In other cases, a quantitative evaluation has been conducted followed by a further conversion into a single quantitative habitat unit which oversimplifies the analysis, potentially leading to erroneous conclusions.

Alternative methods of justifying projects are needed when diverse ecosystems are impacted by a project. For example, in the CERP, where a project impacts a diversity of habitats in Lake Okeechobee, the St. Lucie and Caloosahatchee estuaries, and the central Everglades, attempting to quantify benefits in terms of equitable habitat units is neither practical nor realistic.

Alternative methods for justifying projects should take into consideration how a project fits into the overall framework that has been established for ecosystem restoration. In some cases this could simplify and make more meaningful the project justification process. For example, there may be a need to increase storage capability in order to have more water management flexibility that will facilitate other follow-on restoration projects. In this case, the increment of storage that a project attains should be considered

in the justification process. In addition, the fact that this project is an increment of the overall restoration should be taken into consideration in the justification process. This is alluded to when planning for ecosystem projects in the current P&G, but no clear direction on how to implement is provided.

Currently, although multiple output categories exist for watershed projects, only habitat units seem to be acceptable versus a broad array of outputs such as storage, reduction of seepage losses from the natural system, and improved timing of deliveries. In other cases where an ecological target has been identified for a specific area, the percentage of attainment of that goal could be used to judge the success of an alternative. Unfortunately, project teams are being required to convert the percentage of attainment of a target into a quantitative habitat unit calculation of the estimated area impacted that may prove less meaningful than the original calculation.

The benefits and justification process currently used in CERP has led to a situation where justifying individual projects in the vast south Florida ecosystem is challenging at best. Smaller, less costly projects which may be more desirable to decision makers are difficult to justify because of their small benefit to a large ecosystem. In the case of CERP even larger, more costly projects may not deliver adequate benefits because they are the early foundation projects on which overall restoration will build. These projects may be the key to the ultimate success of CERP, but are negatively viewed by decision makers because of their limited immediate benefits, but high cost.